

ZOLOTAREV, N. I.

23341 Za Dal'neysheye Ukrepleniye Svyazi Nauki s Proizvodstvom, 'Tekstil. Prom-St',
1949, No. 7, c. 8-9.

SO: LETOPIS NO. 31, 1949

ZOLOTAREV, N.I.

ZOLOTAREV, N.I., kand.tekhn.nauk

Research institute in the cotton industry. Tekst.pron.17 no.11:50-53
N '57. (MIRA 10:12)

1. Direktor Tsentral'nogo nauchno-issledovatel'skogo instituta
khlopchatobumashnoy promyshlennosti.
(Cotton manufacture) (Textile research)

ZOLOTAREV, N.I. (Moscow)

Tasks in the automatization of technological processes in the
cotton-textile industry. Avtom. i telem. 15 no.5:400-405 S-O '54.
(MIRA 8:1)

(Textile machinery) (Cotton machinery)

ZOLOTAREV, N.I., kandidat tekhnicheskikh nauk.

Prospects for technical progress in the cotton industry.
Tekst. prem. 16 no.1:9-10 Ja '56. (MIRA 9:4)

1. Direktor N.N.IKhBI.
(Cotton manufacture)

ZOLOTAREV, N.I., kand. tekhn. nauk, red.; KAPELEVICH, Ye.I., red.;
MEDVEDEV, L.Ya., tekhn. red.

[Scientific research papers; collection of reports on work
completed during 1958] Nauchno-issledovatel'skie trudy;
sbornik rabot za 1958 god. Pod red. N.I. Zolotareva. Mo-
skva, Izd-vo nauchno-tekhn. lit-ry RSN'SR, 1960. 156 p.
(MIRA 15:8)

1. Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut
khlopkotolunazhnoy promyshlennosti.
(Cotton manufacture) (Research, Industrial)

1. ZOLOTAREV, N. K.
2. USSR (600)
4. Measuring Instruments
7. Measuring device for automatic grinding of inside bearing rings. Stan.i instr. 23 no. 12, 1952.

9. Monthly Lists of Russian Accessions, Library of Congress, March 1953, Unclassified.

ZOLOTOV, A. I.; LESTOVA, N. N.

... and prospects. Tekhn. prom. 25 no. 7:1-5 J1 '65. (MIRA 13:8)

1. Sanktsen Tsentral'nogo nauchno-issledovatel'skogo instituta
zhelezobetonnoy promyshlennosti (TSNENI) (for Kozlovskiy).
2. Glavnyy sekretar' Tsentral'nogo nauchno-issledovatel'skogo
instituta zhelezobetonnoy promyshlennosti (TSNENI) (for
Golovskiy).

1. ZOLOTAREV. N. K.
2. USSR (600)
4. Grinding and Polishing
7. Measuring device for automatic grinding of inside bearing rings. Stan. i instr.
23 no D ' 52.
12

9. Monthly List of Russian Accessions, Library of Congress, March 1951, Unclassified.

1. ZOLOTAREV, N. K.
2. USSR (600)
4. Spiral Milling
7. Device for measuring pitch in butt threads of the Archimedean spiral type, Stan 1 instr., 24, No. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April, 1953, Uncl.

CHUBAROV, G.S.; DAVYDOV, I.V.; ZOLOTAREV, N.M.; GULYAYENKO, S.I.;
PILIPENKO, P.P.; KUDRYASHOVA, L.A.; ROGULINA, A.M.

[Recommended number of workers in plants producing clay bricks]
Tipovye shtaty rabochikh zavodov glinianogo kirpicha. Moskva,
1959. 221 p. (MIRA 15:2)

1. Gosudarstvennyy projektnyy institut po proyektirovaniyu zavodov stroitel'nykh materialov. 2. Normativno-issledovatel'skiy otde'l Gosudarstvennogo projektnogo instituta po proyektirovaniyu zavodov stroitel'nykh materialov(for all).
(Brick industry)

ZOLOTAREV., N. S.

Raket silovykh skhem dvigatelei. (Tekhnika vozdushnogo flota, 1937, v. 11, no. 4, p. 48-60, diagrs.)

Title tr.: Stress analysis of engine elements.

TL50h. Th 1937

SC: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

ABRAMOV, M.I.; BELIZIN, V.I.; DEVITSKIY, S.M.; ZATULA, V.I.; ZOLOTAREV,
V.H.; ZOLOTAREV, I.S.; IL'INA, M.I.; KOLYSHKINA, H.S.; KUDASOV,
L.P.; MAKHLIN, V.N.; MEDVEDEV, G.S.; NEKHAYEV, I.S.; OLEYNIKOV, M.S.;
PARKHOMENKO, P.N.; TOMASHEVSKIY, V.I.; FEDUNETS, I.Kh.; KHRAMTSOV,
V.K.; ZOLOTAREV, N.V., red.; SEVRYUKOV, P.A., tekhn.red.

[Planning on collective farms; manual] Planirovanie v kolkhozakh;
spravochnik. Kursk, Kurskoe knizhnoe izd-vo, 1960. 437 p.

(MIRA 14:2)

(Collective farms)

KALYAKIN, V.M., inzh.; ZOLOTAREV, N.V., kand. tekhn. nauk

Instrument for measuring the low speeds of polishing pulp
flow. Stek. 1 ker, 20 no.8:20-22 Ag '63. (MIRA 16:11)

1. Saratovskiy politekhnicheskij institut.

ZOLOTAREV, N.V.

Thermophysical characteristics of alluvial sands. Kat. po lab. issl.
merzl. grunt. no.3:227-233 '57. (MIRA 10:11)
(Sand) (Heat---Conduction)

ZOLOTAREV, N. V. (Aspirant)

"Problems of Thermotechnical Calculations With the Fluid-Mechanics Method During the Erection of Earth Embankments Under Winter Conditions." Cand Tech Sci, Moscow Order of Labor Red Banner Construction Engineering Institute V. V. Kuybyshev, 21 Dec 54. (VM, 9 Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)

SO: SUM No. 556, 24 Jun 55

ZOLOTAREV, N. V.

1472 Voprosy teplotekhnicheskogo rascheta pri vozvedenii zemlyanykh plotin metodom gidromekhaniza tsii v zimnikh usloviyakh. M., 1954. 12 s 2^o sm. (M-Vo vyssh. obrazovaniya SSSR. Mosk. ordena Trud. Krasnogo Znamen' inzh-stroit. in-t im. V. V. Kuybysheva). 110 ekz. B. ts.- (54- 51611)

SO: KNIzhnaya Letopis', Vol. 1, 1955

[illegible]

ZOLOTAREV, N.Ya.

Fine crushing of granite. Vzryv.rab. no.3:60-69 '56..
(NIRA 16:2)
(Blasting) (Granite industry)

DUL'TSEV, P.P.; ZOLOTAREV, N.Ya.

Trench method of blasting. Vzryv.rab. no.3:91-107 '56.
(MIRA 16:2)
(Blasting)

L 09356-67 EWT(1)
ACC NR: AP6030092

(A)

SOURCE CODE: UR/0317/66/000/008/0024/0028

AUTHOR: Krivozub, D. (Brigadier general; Engineering forces; Candidate of technical sciences; Docent); Zolotarev, O. (Candidate of technical sciences; Docent)

ORG: Nono

TITLE: Contactless generators 5

SOURCE: Tekhnika i vooruzheniye, no. 8, 1966, 24-28

TOPIC TAGS: electric power engineering, electric generator

ABSTRACT: After a general discussion of the well-known commutation deficiencies of d-c generators and various a-c commutator machines, the authors describe some types of electric generators designed without commutators, brushes, slip rings or any other similar contacts. The authors consider such types of "contactless" generators (including their excitation and voltage regulation circuits) from the standpoint of their possible use for small military mobile power stations, various motor vehicles and aircraft electrical systems. The first type described by the authors consists of a synchronous generator with an exciter mounted on the generator shaft and equipped with rotating rectifiers. The design and operation of the machine is outlined by using a cross-section drawing and a connection diagram. The generator is reliable in operation, can be used in explosive atmospheres and does not cause radio interferences. However, it is more complicated in design having rectifiers and additional windings. The second type of synchronous genera-

Card 1/2

L 09356-67
ACC NR: AP6030092

tor includes a rotor made of permanent magnet and enveloped by stator pole windings wound on two sleeves of a jaw clutch type. Its design is illustrated and the principles of its function are explained. In general, the generator is heavy and of a low power capacity. Its improved version provided with a rotating excitation winding is also described and shown in a cross-section projection. It is a compromising version because the rotating winding must be provided with sliding contacts. In order to eliminate sliding contacts the generator can be made with a fixed excitation winding. Two versions are described of which the first is equipped with a winding fastened to a core inside the rotor and the second represents a generator with a fixed winding placed symmetrically between the stator and rotor. Both versions are illustrated and the formation of their magnetic circuits is explained stressing that the first version is used for small generating capacities and the second one for larger types of generators. Such an enlarged model composed of three pole circuits is shown in a cross-section projection. Orig. art. has: 4 figures.

SUB CODE: 10/ SUBM DATE: None

ZOLOTAREV, O. I., DOCENT

PA 40/49T25

USSR/Electricity

Feb 49

Conductors
Currents, Electric

"The Problem of Surface Effect," Docent O. I.
Zolotarev, Cand Tech Sci, M1 Eng Acad Imenl
Kuybyshev, 2 pp

"Elektrichestvo" No 2

Attempts to find simple rule to determine points
of a cross section where amplitude of current
density has greatest value, which will correct
for a wide range of frequencies. Finds that
maximum and minimum values of amplitude of

40/49T25

USSR/Electricity (Contd)

Feb 49

alternating current density are found at same
points in conductor at which magnetic induction,
caused by flow of direct current through con-
ductor, has maximum and minimum value. Sub-
mitted 8 Mar 48.

40/49T25

ZOLOTAREV, O. I.

USSR/Electricity - Motors, Induction Aug 51

"Determination of the Efficiency and Power Factor of Induction Motors Under Continuously Changing Load," O. I. Zolotarev, Cand Tech Sci, O. I. Zolotarev, Cand Tech Sci, All-Union Sci Res Petroleum Inst

"Elektrichstvo" No 8, pp 43-47

Derives formulas for the efficiency and power factor of an induction motor operating under continuously changing load. These formulas permit one to judge the efficiency and power types of motors if the efficiency and power

196R28

USSR/Electricity - Motors, Induction Aug 51
(Contd)

Under const load and the form factor of the power curve on the motor shaft are known.
Submitted 15 Sep 50.

196R28

ZCLOTAREV, O. I.

Electrical Engineering Abst.
Vol. 57 No. 673
Jan. 1954
Electrical Engineering

621.319.210.3 : 616.319.723
81. Amplifying mechanism with negative feedback. O. I. ZCLOTAREV. *Elektricheskoye*, 1953, No. 3, 27-31, 48

The author considers amplifiers as special cases of generators and excitors with combined in-phase excitation and negative voltage feedback. The introduction of negative feedback is found to be equivalent to a relation of the characteristics of the field circuit. The physical processes corresponding to this are considered. A construction of the external characteristics of the machine can be based on this concept and some fundamental relations derived which are shown to be useful for the solution of certain practical problems. The mathematically simple derivations are obtained from consideration of the cases of generator-regulator with shunt field, and generator-regulator with series field.

621.319.210.3

ZOLOOTAREV, O.T.

AID P - 1471

Subject : USSR/Electricity

Card 1/1 Pub. 27 - 22/36

Authors : Zolotarev, O. I., Kand. of Tech. Sci.

Title : Amplidyne regulators with in-phase field (Discussion of the article by O. T. Zolotarev, Elektrichestvo, No.3, 1953)

Periodical : Elektrichestvo, 2, 68-69, F 1955

Abstract : The author in reply to the criticism of his article in this issue of this journal, (see AID P - 1470) explains that objections raised against it concerned the first part, the "Statement of the problem", which introduced simplifications generally accepted in technical literature. He then gives detailed explanations, and concludes that if the objections raised were to be admitted, the result would not be an amplidyne regulator with in-phase field, but a d-c generator with combined excitation. The problem is open for discussion. Four diagrams.

Institution: None

Submitted : No date

SOURCE CODE: UR/0018/66/000/004/0044/0044

ACC NR:AP6023018

(A)

AUTHOR: Zolotarev, P. (Colonel)

ORG: None

TITLE: As quickly as possible, using own equipment [Decontamination exercise]

SOURCE: Voyennyy vestnik, no. 4, 1966, 44-47

TOPIC TAGS: CBR decontamination kit, military training, military personnel, CBR protective equipment

ABSTRACT: Training small units to eradicate CBR contamination is one of the most important of assignments. A typical exercise requires troops to decontaminate equipment (tanks, tractors and trucks) using the DKV (armaments and equipment CBR decontamination kit) which can decontaminate 78 large pieces of equipment if chemical and bacteriological decontamination is required, and 26 units if radio-active decontamination is needed. Three drills each two hours long, are recommended for training the men to use the DKV on their own. The drills are described in detail, and general questions dealing with the properties of nuclear and chemical weapons, permissible contamination norms for various objects, and safety measures during decontamination, are taken up. An exercise is described in which a wooded area in which a tank company is deployed, contaminated by a simulated nuclear blast, is

Card 1/2

ACC NR: AP6023018

evacuated and the tanks decontaminated by own DKV equipment. Orig. art. has:
2 figures.

SUB CODE: 15,05/SUBM DATE: None

Card 2/2

ZOLOTAREV, P.A.

Obtaining high-viscosity residual lubricants. Neftoper. i nefte-
khim. no.10:14-17 '64. (MIRA 17:12)

1. Novo-Ufimskiy neftepererabatyvayushchiy zavod.

ZOLOTAREV, P.A.

Vacuum unit for the distillation of fairly oil-free paraffin.

Neftoper. i neftokhim. no.9:17-20 '64.

(MIRA 17:10)

1. Novo-Ufimskiy neftepererabatyvayushchiy zavod.

KLEYMENOV, V.V., inzh.; ZOLOTAREV, P.A., kand. tekhn. nauk; NAZIKYAN,
A.G., kand. tekhn. nauk

Study of transient processes in the traction motor networks
of main line electric locomotives. Elektrotehnika 36 no.8:
35-37 Ag '64. (MIRA 17:9)

ZOLOTAREV, P.A.

Selecting the basic parameters of the traction motors for a.c.
locomotives. Sbor. nauch. trud. EINII 2:116-131 '62.
(MIRA 16:8)

(Electric railway motors)

BOCHAROV, Vasilii Ivanovich; ZOLOTAREV, Petr Alekseyevich;
NAKHODKIN, M.D., kand. tekhn. nauk, red.; KHITROVA, N.A.,
tekhn. red.

[Traction motors of a.c. electric locomotives] Tiagovye dvigateli
elektrovozov peremennogo toka. Moskva, Transzheldoriziat, 1962.
94 p. (MIRA 15:6)

(Electric railway motors)

ZOLOTAREV, P.A., inzh. (Novocherkassk); POSKROBKO, A.A., inzh.
(Novocherkassk); SITNIK, N.Kh., kand.tekhn.nauk (Novocherkassk)

Selecting the method of voltage regulation on 1 a.c.electric
locomotives. Zhel.dor.transp. 44 no.1:38-43 Ja '62.

(MIRA 14:12)

(Electric locomotives)

(Voltage regulators)

ZOLOTAREV, Petr Alekseyevich; BRATOLYUBOV, Vsevolod Borisovich

Traction motors for rectifying locomotives with a 1000 volt rating.
Izv.vys.ucheb.zav.; elektromekh. 5 no.1:47-54 '62. (MIRA 15:2)

1. Nachal'nik laboratorii Novochoerkasskogo nauchno-issledovatel'skogo
instituta elektrozostroyeniya (for Zolotarev). 2. Rukovoditel'
gruppy Novochoerkasskogo nauchno-issledovatel'skogo instituta
elektrozostroyeniya (for Bratolyubov).
(Electric railway motors)

ZOLOTAREV, P.A., inzh.; GREBENKIN, V.Z., inzh.

Wear resistance of the collectors of electric traction motors.

Vest. elektroprom. 34 no.1:43-46 Ja '63. (MIRA 16:1)

(Electric railway motors) (Electric locomotives)

ZOLOTAREV, P.A., VASILENKO, G.V.

Improving the traction properties of N8 and VL23 electric locomotives. Zhel.dor.transp. 42 no.8:21-22 Ag '60.
(MIRA 13:8)

1. Nachal'nik otдела elektricheskikh mashin konstruktorskogo byuro Novocherkasskogo zavoda (for Zolotarev). 2. Rukovoditel' gruppy elektricheskikh mashin konstruktorskogo byuro Novocherkasskogo zavoda (for Vasilenko).
(Electric locomotives)

ZOLOTAREV, P.A., inzh.

Traction motors for electric locomotives operating on main
lines. Vest. elektroprom. 32 no.5:31-34. My '61. (MIRA 15:5)
(Electric railway motors)

SOV/144-59-5-9/14

AUTHOR: Zolotarev, P.A., Engineer

Electric

TITLE: Methods of Improving the Commutation of Traction Motors with Pulsating Current

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Elektromekhanika, 1959, Nr 5, pp 74 - 91 (USSR)

ABSTRACT: It is still difficult to ensure satisfactory commutation in the electric traction motors of rectifier electric locomotives, and published information on this subject is incomplete and often contradictory. This article attempts to systematize the various methods of improving the commutation of such motors. A d.c. traction motor with an unlaminated stator system is taken as the reference type with which others are compared. The degree of pulsation in the current is assumed to be such as is normally met in rectifier locomotives. Measures that may be taken to improve commutation are divided into two groups which are considered in turn, namely: methods involving special construction of particular parts of the motor; and methods involving special circuits. Under the first heading, various components are considered, as follows. It is important to choose the right grade of brush, and a high value of

Card 1/10

SOY/144-59-5-9/14
Electric

Methods of Improving the Commutation of Traction Motors with Pulsating Current

transient voltage drop is desirable. Other things being equal, the out-of-balance e.m.f. that can be tolerated is proportional to the increase in transient voltage drop of the brushes. In order to increase the resistance to commutation currents caused by uncompensated e.m.f.'s, the brushes should consist of two or three parts. In this way, the tolerable out-of-balance e.m.f. can be increased by 15 - 20%. The shape of the interpole shoes is important. Figure 2 illustrates calculated curves of field shape under the interpole of traction motor type NB-412. It has been found that quite a small change in the shape of the shoe, illustrated by a dotted line, causes an appreciable reduction in the out-of-balance e.m.f. that can be tolerated; in the particular case considered the change was about 10%. The air gap under the interpole should be made as long as possible in order to reduce the reactive

Card 2/10

SOV/144-59-5-9/14

Electric

Methods of Improving the Commutation of Traction Motors with Pulsating Current

e.m.f. and pulsation of the flux caused by the rotor teeth. Normally the air-gap length should be equal to or greater than three-quarters of the slot width. The separation between the pole and the frame should also be as long as possible, and the non-magnetic spacer should be of non-metallic material. In order to reduce interaction between the field of the main pole and that of the interpole in the commutation zone, the magnetic overlap should not be large and the gap at the edges of the main pole should be about twice as long as in the middle. In traction motors supplied by pulsating current it is particularly important to establish and observe close manufacturing tolerances on dimensions. Table 1 gives a list of permissible tolerances on a number of important dimensions on such motors. The armature winding should be so designed that the reactive e.m.f. is as small as possible, and the coils in a given slot should be of equal inductance. The necessary conditions are best assured if the number of commutator bars per slot is small and the conductors are laid flat.

Card 3/10

Electric SOV/144-59-5-9/14

Methods of Improving the Commutation of Traction Motors with Pulsating Current

The relationship between the reactive e.m.f. and the slot construction for a given motor, other things being equal, is given in Table 2. The type of winding should be one in which the self- and mutual-inductions are small; the influence of the type of winding on the magnitude of the reactive e.m.f. is indicated in Table 3. Attention should be paid to the design of the core of the main pole; by using laminations of appropriate thickness it is possible to effect some control over the eddy currents, thereby adjusting the angle of magnetic retardation of the armature reaction flux. Data about this means of adjustment appear in Table 4. Corresponding information for the interpole is given in Table 5. Oscillograms of the current in the interpole winding and of the e.m.f. in the frame are given in Figure 3 where Figure 3a relates to a solid pole, Figure 3b a laminated pole and Figure 3g a laminated stator.

Card 4/10

SOV/144-59-5-9/14

Electric

Methods of Improving the Commutation of ~~Traction~~ Motors with Pulsating Current

In making these tests the armature and main pole windings were disconnected. It will be seen that modification in the construction of individual parts of the magnetic circuit of the interpole can affect the magnitude and direction of the vector of the alternating component of the m.m.f. of the interpole in the commutation zone. Table 6 shows the influence of the pole construction on the out-of-balance e.m.f.'s, giving calculated values of the latter for various combinations of main and interpole construction on a given motor. Data about the influence of a compensating winding on the out-of-balance e.m.f. with various types of magnetic circuit construction for a particular motor are given in Table 7. It will be seen that inclusion of a compensating winding somewhat reduces the out-of-balance e.m.f. but its main advantage is improvement in the potential conditions on the commutator and the possibility that it affords of making the machine lighter. Such windings are, however, somewhat difficult to manufacture and repair. The use of special circuits to improve commutation is then considered. The first circuit considered

Card 5/10

Electric SOV/144-59-5-9/14
Methods of Improving the Commutation of Traction Motors with
Pulsating Current

is that shown in Figure 4 in which the field winding is shunted by an active resistance. This circuit is used in locomotives Type NO and N60. The use of a diverter of this kind reduces the reactive e.m.f. but if the locomotive speed is controlled by weakening the field of the main pole the value of the diverter needs consideration. It should be such as to reduce the stray losses due to pulsation of the main flux and to limit sufficiently the transformer-e.m.f. in the short-circuited armature turns. Eq (5) may be used to determine the value of the transformer-e.m.f., the values of factors entering into this equation being given in the graphs of Figures 5 and 6. Permissible values of the out-of-balance e.m.f. when field-weakening is used may be determined from Figure 7 and Table 8. The circuit shown in Figure 8, in which the field winding is shunted by an inductance, may be used to ensure

Card 6/10

SOV/144-59-5-9/14
Electric

Methods of Improving the Commutation of Traction Motors with Pulsating Current

mutual compensation of the out-of-balance and transformer-e.m.f.'s during the field-weakening. In this circuit a constant resistive shunt controls the phase of the transformer-e.m.f. The inductance is connected in series with the field-weakening resistance so that the adjustment is maintained when the field is weakened. When such inductive shunting is used the transformer-e.m.f. is less than half its value with the full field. If the inductance is increased in order to increase the alternating component of the current in the field winding the construction of the shunts is much heavier and it is difficult to maintain the phase adjustment under different operating conditions. The relationship between the field winding inductance and the load with allowance for the demagnetising effect of eddy currents and saturation may be determined from Eq (7) and then the shunt parameters may be calculated. Experience shows that this circuit somewhat reduces the out-of-balance e.m.f.'s and improves the operation of a motor on pulsating current. The interpole windings may be shunted inductively, as shown in Figure 9, to rotate the vector of the altern-

Card 7/10

SOV/144-59-5-9/14
Electric

Methods of Improving the Commutation of Traction Motors with Pulsating Current

ating component of the interpole winding so that it leads the armature current. A capacitor is used to prevent the flow of d.c. A disadvantage of this circuit is that the resistance of the interpole windings must be high. A variant of the circuit given in Figure 9 is shown in Figure 10 in which the armature winding is shunted by a capacitor and inductance. This causes the alternating component of the armature current to lag relative to that of the interpoles. A disadvantage of this circuit is that it is difficult to ensure stable phase-adjustment with load variations. In the further variant shown in Figure 11 both the interpole and armature windings are shunted. The graph of Figure 12 shows the relationship between the degree of sparking and the value of the pulsating current for this circuit and also for a normal circuit as determined on the test bed. During the tests about half of the alternating component

Card 8/10

SOV/144-59-5-9/14
Electric

Methods of Improving the Commutation of Traction Motors with Pulsating Current

of the current passed through the shunt. The inductance of the armature winding as a function of load with allowance for the demagnetising effect of eddy currents and saturation, may be determined from Eq (9). A similar determination for the interpole is given by Eqs (11) - (13). An effective way of improving the operation of traction motors is to increase the number of phases of the rectifier. Evidence is given in Table 9, from which it follows that, compared with the ordinary circuit, even three-phase rectification cuts the current pulsation by a third, improving the commutation and reducing the heating of the motor winding; there is also a considerable reduction in the pulsation of the rectifier voltage. A three-phase rectifier circuit with single-phase supply to the locomotive is shown in Figure 15. With this circuit a phase-converter can also be used to compensate reactive power. Conditions may also be improved by reducing the system frequency, and information is given in Table 10 about the frequencies used in different countries. Table

Card 9/10 11 concerns traction motors used on rectifier locomotives

SOV/144-59-5-9/14
Electric
Methods of Improving the Commutation of Traction Motors with Pulsating Current

made in a number of countries. It should be noted that the American locomotives have comparatively heavy traction motors with a 25 c/s supply. The French locomotives use comparatively light motors and tend to adopt special measures to ensure satisfactory commutation. There are 15 figures, 11 tables and 2 Soviet references.

ASSOCIATION: Novocherkasskiy elektrozostroitel'nyy zavod
(Novocherkassk Electric Locomotive Manufacturing Works)

SUBMITTED: March 21st, 1959.

Card 10/10

< ZOLOTAREV, P.A., inzh..

Commutation of pulsating current motors and volt-ampere
characteristics of the brushes. Vest. elektroprom.

33 no.10:40-42 0 '62.

(MIRA 15:9)

(Electric motors, Direct current)

ZOLOTAREV, P.A., inzh.

Determining the region of sparkless commutation by calculations.

Vest.elektrom. 30 no.3:39-41 Nr '59.

(MIRA 12:4)

(Electric machinery--Direct current)

ZOLOTAREV, P.A., inzh. (g. Novocherkassk); BOCHAROV, V.I., inzh.
(g. Novocherkassk)

MB-12M traction motor of an a.c. M50-series electric locomotive.
Elek. i tepl. tiaga 4 no. 12:19-22 D '60. (MIRA 14:1)
(Electric railway motors)

ZOLOTAREV, P.A., inzh.

What kind of electric traction motor is needed for rectifier-type electric locomotives? Zhel.dor.transp. 42 no.12:45-46 D '60. (MIRA 13:12)

1. Nachal'nik otдела elektricheskikh mashin Spetsial'nogo konstruktorskogo byuro Novocherkasskogo elektrozostroitel'nogo zavoda, g. Novocherkassk.

(Electric locomotives)

AUTHOR: Zolotarev, P.A. Engineer

SOV/144-58-3-6/18

TITLE: On the Commutation of DC Traction Motors Fed From
Ionic Rectifiers (O kommutatsii tyagovykh dvigateley
postoyannogo toka elektrovozov s ionnymi vypryamitelyami)

PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Elektromekhanika,
1958, Nr 8, pp 54 - 65 (USSR)

ABSTRACT: Running of DC traction motors by means of current supplied from full-wave rectifiers complicates the commutation. In this paper, an attempt is made to analyse this problem and to determine certain criteria for DC traction motors which are intended for electric locomotives operating on AC rectified by means of ionic rectifiers (ignitrons). The basic circuit of a traction motor, which is fed from full-wave rectifiers, is given in Figure 1; in Figure 2 typical oscillograms are reproduced of the oscillations of the currents and voltages in the individual elements of such a circuit. Investigations are carried out for the Soviet traction motors, DFE-400 and NB-406. On the basis of the obtained results, the following conclusions are arrived at: 1) the reactance e.m.f. caused by the alternating component of the current is not compensated

Card1/3

SOV/144-58-8-6/18

On the Commutation of DC Traction Motors Fed From Ionic Rectifiers

and increases as a result of the e.m.f. induced by the total armature flux and by the supplementary poles; 2) from the point of view of sparking, the average value of the non-compensated reactance e.m.f. during commutation, caused by the AC component, is 0.5 V for motors of current designs; 3) the absolute value of the reactance e.m.f., the speed, the voltage conditions, the magnitude of the current pulsation and the pulsation of the voltages between adjacent commutator laminations have little influence on commutation for variations within the limits of the operating characteristics of the motor; 4) when designing DC traction motors for electric locomotives fed with ionic amplifiers, it is necessary to pay particular attention to the ratio of the magnitudes of the current pulsations in the reactance e.m.f. of the motor. For ensuring reliable operation of highly stressed motors, it is necessary to adopt special measures for improving commutation; 5) the method of investigation applied in

Card2/3

SOV/144-58-8-6/18
On the Commutation of DC Traction Motors Fed From Ionic Rectifiers
this paper requires further improvement but, in the
first approximation, it yields results which are in
good agreement with experimental data.
There are 11 figures, 2 tables and 5 references, 4 of
which are Soviet and 1 German

ASSOCIATION: Novocherkasskiy elektrovostroitel'nyy zavod
(Novocherkassk Electric Locomotive Works)

SUBMITTED: April 5, 1958

Card 3/3

EOV/110-59-3-10/25

AUTHOR: Zelotarev, P.A., Engineer

TITLE: A Theoretical Method of Determining the Region of Sparkless Commutation (Raschetnyy metod opredeleniya oblasti bezyskrovoy kommutatsii)

PERIODICAL: Vestnik Elektromyshlennosti, 1959, Nr 3, pp 39-41 (USSR)

ABSTRACT: Experimental methods of determining the zone of sparkless commutation sometimes cannot be used over the entire load range particularly on traction motors when field weakening is used. The method of calculating the zone of sparkless commutation that is proposed is based on an analysis of commutating tests on traction motors. Commutation sparking is interpreted in the classical way as resulting from interruption of the additional current in the commutating section that results from uncompensated emf's in the circuit. It is first stated that a limiting value of the uncompensated emf exists and is a constant, though different authors give different values for it. In any particular machine the uncompensated emf due to different causes is also a constant characteristic of the particular machine. If the machine commutates

Card 1/3

SOV/110-59-3-10/25

A Theoretical Method of Determining the Region of Sparkless
Commutation

satisfactorily there is some reserve between the two values. Therefore, the width of the zone of sparkless commutation is governed by the amount of this reserve and if this is determined experimentally for different types of machine, curves of the region of sparkless commutation can be calculated. The magnitude of this reserve as a function of current was determined for three types of traction motor, the main data of which are tabulated. During the investigations the following were varied: the field weakening of traction motors; the grade of brushes; the shape of the interpole tips; the commutator voltage; the brush polarity and others. Curves of the reserve additional voltage as function of current shows that although the motors tested were of varying different construction and output the reserve voltage is practically constant at 0.35 V over the range of 50-150% rated load. Minor changes in the value of the additional voltage that results from field weakening,

Card 2/3

SOV/110-59-3-10/25

A Theoretical Method of Determining the Region of Sparkless
Commutation

brush grade alteration and alteration of interpole end
piece shape are given in Fig.1, 2 and 3. There are
4 figures and 1 table.

SUBMITTED: 11th August 1958

Card 3/3

Zolotarev, P.A.

110-2-7/22

AUTHORS: Zolotarev, P.A. (Engineer), Kozorezov, M.A. (Engineer) &
Sitnik, N.Kh. (Engineer)

TITLE: The drive of auxiliary equipment in a.c. electric locomotives.
 (Privod vspomogatel'nykh mekhanizmov elektrovozov peremennogo toka.)

PERIODICAL: Vestnik Elektromyshlennosti, 1958, No.2, pp.24-28. (USSR)

ABSTRACT: With the increasing development of 50 c/s locomotives, more attention must be paid to the drive of auxiliaries. The main auxiliaries are compressors, fans, pumps and low voltage d.c. generators, all being constant-speed and-torque machines except the compressor. In addition to the usual requirements, such as reliability and simplicity of servicing, they must withstand ambient temperatures ranging between +40 and -50°C. and supply-voltage variations of +10 and -30%. The starting torque required of the driving motor of a compressor type 3-500 and the ambient temperature are related in Fig.1, based on the experimental data by Engineer G.G. Rekus of the Moscow Higher Technical College. Auxiliary equipment is supplied from a special single-phase winding on the locomotive power transformer. The first Soviet main-line a.c. 50 c/s locomotive type OP-22, constructed in 1938, used 3-phase induction motors supplied by a synchronous phase-splitter for auxiliary drive. In 1954 the Novochoerkassk Electric Locomotive Works produced 50 c/s locomotives type HO in which the auxiliaries are driven by capacitor-start induction notors. Abroad, extensive use is

Card 1/3

The drive of auxiliary equipment in a.c. electric locomotives.

110-2-7/22

recommended, particularly for rectifier locomotives in which the power-factor can be improved by installing synchronous compensators on the locomotive and combining the phase-splitter and compensator in one machine. A series d.c. motor supplied through a rectifier or alternatively a single-phase commutator motor is advised for the compressor drive. There are 5 figures, 3 literature references (2 Russian).

SUBMITTED: July, 1, 1957

ASSOCIATION: The Novocherkassk Electric Locomotive Works (Novocherkasskiy elektrovostoitel'nyy zavod)

AVAILABLE: Library of Congress.

Card 3/3

ZLOTAREV, P.A.

Traction motors with pulsating current and a 1500 volt potential.
Sbor. nauch. trud. Elnii 3:68-75 '63. (MIRA 17:4)

ZOLOTAREV, P.A.

Tractive electric motors for main-line electric locomotives.

Biul.tekh.-ekon.inform. no.5:67-71 '61.

(MIRA 14:6)

(Electric locomotives)

ZOLOTAREV, Petr Alekseyevich, kand. tekhn. nauk

Regulation of the excitation current of electric traction
motors with switching of a bank of coils with opposite
polarity. Izv. vys. ucheb. zav.; elektromekh. 8 no.1:115-
118 '65. (MIRA 18:3)

1. Nachal'nik konstruktorskogo otдела elektricheskikh mashin
Vsesoyuznogo nauchno-issledovatel'skogo i proyektirovkostruk-
torskogo instituta elektrozostroyeniya.

ZOLOTAREV, P.A., inzh.-konstruktor; MOZOREZOV, M.A., inzh.-konstruktor;
MELIKHOV, V.L., inzh.-konstruktor; NOVOGRENKO, N.M., inzh.-
konstruktor; SVERDLOV, V.Ya., inzh.-konstruktor; Tishkanov, B.A.,
inzh.-konstruktor; SHAPIRO, I.L., inzh.-konstruktor

The N81 eight-axle a.c. locomotive. Elek.i tepl.tiaga 7
no.2:20-25 F '63. (MIRA 16:2)

(Electric locomotives)

ZOLOTAREV, P.A., inzh.-konstruktor; KOZOREZOV, M.A., inzh.-konstruktor;
MELIKHOV, V.L., inzh.-konstruktor; NOVOGRENKO, N.M., inzh.-
konstruktor; SVERDLOV, V.Ya., inzh.-konstruktor; TUSHKANOV, B.A.,
inzh.-konstruktor; SHAPIRO, I.L., inzh.-konstruktor

VL80 eight-axle a.c. locomotive. Elek. i tepl. tiaga 7 no.4:
24-28 Ap '63. (MIRA 16:5)

1. Novocherkasskiy elektrovostroitel'nyy zavod i Novocherkasskiy
nauchno-issledovatel'skiy institut elektrovostroyeniya.
(Electric locomotives)

ALIKIN, R.I.; GORDIYENKO, P.I.; BESPROZVANNYY, I.G.; ZHIBTSOV, P.P.;
ZOLOTAREV, P.A.; ZUSMANOVSKAYA, L.L.; IBRAGIMOV, K.G.; KOZOREZOV,
M.A.; KOKOREV, A.I.; KUPRIANOV, Yu.V.; KUROCHKA, A.L., kand.
tekhn. nauk; LITVINOVA, L.M.; LOZANOVSKIY, A.L., kand. tekhn.
nauk; MAVDRIKOV, F.I.; MAKHAN'KOV, L.V.; PUKALOV, V.I.; RAYLYAN,
A.F.; SVERDLOV, V.Ya.; SKLYAROV, B.S.; SOLOV'YEV, K.M., kand.
tekhn. nauk; STUKALKIN, A.N.; SUROVIKOV, A.A.; TIKHONOV, N.G.;
SHTEFENKO, P.K.; YANOV, V.P.

[VL80 electric locomotive.] Electrovoz VA80. Novocherkassk. Nauchno-
issledovatel'skii institut elektrovozostroeniia. Sbornik nauchnykh
trudov, vol. 5) (MIRA 18:5)

ZOLOTAREV, P.A.

Residual high-viscosity oil, Nefteper. 1. neftekhim, no.5:
3-6 '65. (MIRA 18:7)

ZOLOTAREV, Petr Alekseyevich, inzh.

Some problems concerning the design of electric locomotives.
Izv. vys. ucheb. zav.; elektromekh. 5 no.6:670-678 '62.
(MIRA 15:10)

1. Nachal'nik konstruktorskogo otdela elektricheskikh mashin
Novocherkasskogo nauchno-issledovatel'skogo instituta elektro-
vozostroyeniya.

(Electric locomotives)

ZOLOTAREV, P.P. (Moskva)

Propagation of weak perturbances in mixtures. Izv. AN SSSR
Mekh. i mashinostr. no.4:178-180 '64 (MIRA 17:8)

ZOLOTAREV, P.P. (Moskva)

Equations of thermoelasticity for porous media saturated with
liquid or gas. Inzh. zhur. 5 no.3:425-430 '65.

(MIRA 23:7)

ZOLOTAREV, P.P.; NIKOLAYEVSKIY, V.N.

Distribution of pressure waves in rocks saturated with fluid.
Trudy VNII no.42:112-130 '65. (MIRA 18:5)

ZOLOTAREV, P.P. (Moscow)

"Propagation of acoustic waves in porous beds saturated
with gas or oil"

report presented at the 2nd All-Union Congress on Theoretical
and Applied Mechanics, Moscow, 29 Jan - 5 Feb 64.

ZOLOTAREV, P.P., (Moskva)

Equations of heat conduction in heterogeneous continuums. Inzh.
zhur. 3 no.3:560-562 '63. (MIRA 16:10)

1. Institut mekhaniki AN SSSR.
(Heat—Conduction)

ZHELTOV, Yu.⁸. (Moskva); ZOLOTAREV, P.P. (Moskva)

Propagation of gas in fissured rocks. FMFP no. 5:135-139 S-0
'62. (MIRA 16:1)

1. Vsesoyuznyy neftegazovyy nauchno-issledovatel'skiy institut.
(Gas flow) (Rocks---Permeability)

ZHELTOV, Yu.P.; ZOLOTAREV, P.P.

Linearizing equations of gasflow in fractured rocks. Nauch.-tekhn.
sbor. po dob. nefti. no.20:17-20 '53. (MIRA 17:6)

ACCESSION NR: APL026961

3/0258/64/004/001/0111/0120

AUTHOR: Zolotarev, P. P. (Moscow)

TITLE: Sound wave propagation in a gas-saturated porous medium with rigid frame

SOURCE: Inzhenernyy zhurnal, v. 4, no. 1, 1964, 111-120

TOPIC TAGS: sound wave propagation, gas-saturated porous medium, rigid frame, parallel pipes, constant cross section, damping coefficient, damping curve, dispersion curve, conservation of mass, conservation of impulse, two-phase medium

ABSTRACT: For studying sound wave propagation in a gas-saturated porous medium the author uses a method different from the usual representation of a porous medium as a system of parallel pipes with rigid walls and constant cross section. He considers the medium as solid but two-phased, and for this he writes the averaged equations of conservation and of state. The porous frame is assumed absolutely rigid but subject to the influence of temperature. The author discards second-order terms to get the linearized equations of conservation of mass, impulse, and energy. He assumes the heat exchange to be proportional to the

Card 1/2

ACCESSION NR: AP4026961

difference between the temperatures of the gas and the frame. It is assumed that the coefficient of heat exchange must be determined experimentally. To the previous equations the author adds the equation of state of the gas. The equations he derives are suitable only when the dimensions of a grain are much less than the wave length. The damping and dispersion curves, obtained here under certain simplified assumptions, are compared with the actual ones for the case of a slit-shaped channel, and the limits of applicability for this assumption in computing the damping coefficient are found. Orig. art. has: 3 figures and 52 formulas.

ASSOCIATION: Institut mekhaniki AN SSSR (Institute of Mechanics, AN SSSR)

SUBMITTED: 28Apr63

DATE ACQ: 15Apr64

ENCL: 00

SUB CODE: AI

NO REF SOV: 004

OTHER: 003

Card 2/2

ZOLOTAREV, P.P.; NIKOLAYEVSKIY, V.M. (Moskva)

Propagation of stress and pressure jumps in a water-saturated soil. Izv. AN SSSR. Mekh. no.1:191-196 Ja-F '65.

(MIRA 18:5)

ZOLOTAREV, P.P. (Moskva)

Propagation of sound waves in a gas-saturated porous medium with a rigid frame. Inzh.zhur. 4 no.1:111-120 '64. (MIRA 17:4)

1. Institut mekhaniki AN SSSR.

MAYOROV, V.V.; KAPLAN, B.L.; ZOLOTAREV, P.P.

Approximate method for calculating inter-charge distances in group explosions. Izv. AN Turk. SSR. Ser. fiz.-tekhn., khim. i geol. nauk no.4:56-61 '61. (MIRA 14:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut geofizicheskikh metodov razvedki.

(Explosions)

ZOLOTAREV, P.P.

Equations for heat transfer in porous media. Nauch.-tekhn. sbor.
po dob. nefti no.25:34-38 64. (MIRA 17:12)

1. Vsesoyuznyy neftegazovyy nauchno-issledovatel'skiy institut.

111 AND 112 ORDERS
PROCESSING AND PROPERTIES INDEX

3.4

Polymerization of butadiene in an alternating electrical field. N. Apat'eva, I. G. Gorbunov and E. Shubov. *Gummi i Kautchuk* (U. S. S. R.) 1947, No. 7-8, 37-8. --A description.

A. Pestoff

ASD-55-A METALLURGICAL LITERATURE CLASSIFICATION

ZOLOTAREV, P.V.
 Evaporation as a mechanical division to molecules.
 P. V. Zolotarev. Trans. Inst. Chem. Tech. Leningrad.
 (U. S. S. R. 1, 50-8(1933).—A discussion with math.
 treatment of the energy consumption in the evapn. of
 H₂O, NaCl, Me₂CO and EtOH is based on the Rittinger
 formula.

ZOLOTOREV, P.V.
 Volatility of salts on boiling of their solutions. P. V.
 Zolotarev. *Tr. Inst. Khim. Tekh. Issledov.* (U. S. S. R.)
 1, 54, 5 (1935).—Preliminary expts. indicate that the con-
 tamination of hard, feed waters with salts is caused by
 the atomization of overheated boiler scale on contact with
 water. Chas. Blanc

[illegible]

BC
ZOLOTAREV, S.

A-3

Catalytic oxidation of benzene to maleic acid.
J. S. BAKHIN and S. ZOLOTAREV (J. Appl. Chem.
Russ., 1933, 6, 681-684). Air is passed through
 C_6H_6 at 15°, the vapour is heated to 360°, and passed
over V_2O_5 catalyst at 410-430°, when 14-17%
yields of $(CH-CO_2H)_2$ (I) are obtained. The leaving
gas contains in addition $(CH-CO)_2O$, CO_2 , benzo-
quinone, and unchanged C_6H_6 , which is recovered by
adsorption on cooled SiO_2 gel. The process consists
probably of the reactions: $C_6H_6 \rightarrow PhOH \rightarrow p$ -
 $C_6H_4(OH)_2 \rightarrow$ benzoquinone \rightarrow (I). R. T.

ZOLOTAREV, S.
CA

14

Attempts to decrease the infiltration of water through the deep layers of the soil by means of sodium chloride. S. Zolotarev and L. Dachevski. *Sov. Khimik* 1939, No. 8; 31: 8. *Chem. Abstracts* 42, 890. By introduction of sea salt in weakly saline chernozem soils, the loss of water by infiltration through the deep layers can be reduced considerably. The NaCl content should be equivalent to the total absorption capacity of a soil layer at least 20 cm. thick; in the case under consideration, this amounts to about 3.0 kg. per sq. m. of surface. A. P. C.

ASB-55-A METEOROLOGICAL LITERATURE CLASSIFICATION

ZOLOTAREV, S. , kandidat tekhnicheskikh nauk.

Problem of systematic arrangement of equipment in the grinding division of the mill. Muk.-elev.prom. 20 no.8:18-21 Ag '54. (MLBA 7:9)

1. Odesskiy tekhnologicheskiy institut imeni I.V.Stalina.
(Grain milling machinery)

ZOLOTAREV, S.A.

KACHIYANI, Arkadiy Ivanovich; ZOLOTAREV, S.A., red.; KAYDALOVA, M.D.,
tekhn.red.

[Soils in agricultural regions of the Far East] Pochvy zemle-
del'cheskikh raionov Dal'nego Vostoka. [Khabarovsk] Khabarovskoe
knizhnoe izd-vo, 1954. 165 p. (MIRA 11:1)
(Soviet Far East--Soils)

ZOLOTAREV, S.A.

Unsuccessful manual of soil science for higher forestry schools
("Soil science" by A.A.Rode. Reviewed by S.A.Zolotarev). Nauch.
dokl.vys.shkoly; biol.nauki no.1:230-233 '59. (MIRA 12:5)
(FOREST SOILS) (RODE, A.A.)

ZOLOTAREV, S.A., doktor sel'skohozyaystvennykh nauk, prof.

Genesis and classification of grey forest soils. Nauch. trudy
UASHN 10:189-199 '60. (MIRA 14:3)
(Forest soils)

ZOLOTAREV, S. A.

Forest Soils - Siberia, Eastern

Influence of principal Far East conifer trees on the soil. Pochvovedenie No. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, JUN 19 1953, Unclassified.

ZOLOTAREV, S.A. [Zolotar'ov, S.O.]; BELAYA, O.P. [Bielala, O.P.]

Composition of the silty fraction of the grey wood soils of
the Ukrainian S.S.R. Dop. AN URSR no. 6:794-797 '64.
(MIRA 17:9)

1. Institut geologicheskikh nauk AN UkrSSR. Predstavleno
akademikom AN UkrSSR V.G.Bondarchukom [Bondarchuk, V.H.].

ZOLOTAREV, Sergey Aleksandrovich, prof.; ANTONOVA, N.M., red.;
TRUKHINA, O.N., tekhn. red.

[Forests and soils of the Far East] Lesa i pochvy Dal'nego
Vostoka. Moskva, Izd-vo sel'khoz.lit-ry zhurnalov i plakatov,
1962. 168 p. (MIRA 15:5)
(Soviet Far East--Forest soils)

ZOLOTAREV, S. M.

BARER, G.O.; BELETSKIY, V.Ya.; VORONKOV, P.I.; DEMIDOV, P.O.; IZMAYLOV, A.M.;
DOMBROVSKIY, G.D.; ZOLOTAREV, S.M.; KRAVCHENKO, I.K.; PLATONOV, P.M.;
PANTUCHENKO, A.V.; UGOLIK, E.Y.

V. IA. Girshon. Muk.-elev. prom. 23 no.4:23 4p '57. (MLRA 10:5)
(Girshon, Vasilii Iakovlevich, 1880-1957)

DZYADZIO, A. M.; ZOLOTAREV, B. M.

Flour Mills

Designing mills. G. M. Levlatin. Reviewed by A. M. Dzyadzio, B. M. Zolotarev. Sov. kniga No. 3, 1953.

Monthly List of Russian Accessions, Library of Congress, June 1953. Uncl.

ZOLOTAREV, S.M.

Production of corn meal in the starch and molasses industry.
Sakh.prom. 37 no.7:66-71 JI '63. (MIRA 16:7)

1. Odesskiy tekhnologicheskii institut imeni M.V.Lomonosova.
(Corn meal)

ZOLOTAREV, S.M.; ZABRODSKIY, A.G.; POLOZHISHNIK, A.F.

Separation of corn germs processed in the fermentation industry.
Spir. prom. 28 no.7:20-26 '62. (MIRA 17:2)

1. Ukrainskiy nauchno-issledovatel'skiy institut spirtovoy i likero-vodochnoy promyshlennosti (for Zolotarev, Zabrodskiy).
2. Odesskiy tekhnologicheskii institut (for Polozhishnik).

ZOLOTAREV, S.M.

Technological flow sheet for the processing of corn kernels with
germ separation. Trudy UkrNIISP no.5:49-62 '59. (MIRA 16:11)

ZOLOTAREV, S. V.

Zolotarev, S. M. and Demidov, P. G. "Twenty-five years of the Institute (1922-47). Short historical sketch", Trudy In-ta (Odes. in-t inzhenerov nuklonol. prom-sti i elevator. khoz-va im. Stalina), Vol. II, 1948, p. 9-42.

SO: U-3042, 11 March 53, (Leto is 'nykh Statey, No. 10, 1949).

1. DZIADZIO, A. M., ZOLOTAREV, S. M.
2. USSR (600)
4. Leviatin, G. M.
7. Designing mills. G. M. Levyatin. Reviewed by A. M. Dziadzio, S. M. Zolotarev.
Sov. kniga no. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.